



About Clean Water Action- national NGO since 1972, nearly 1 million members- Clean Water Act, etc.

2 abiding principles to our advocacy work over the years regarding pollution and waste:

- 1) Polluter Pays
- 2) Pollution Prevention

Topic: Is EPR a Good Trash Solution?

Good solutions to trash are those that prevent it from reaching our waterways, and preferably, prevent the waste from being generated to begin with.

Leila will talk about designing EPR to make marine debris generators help pay for the cost of cleanup and to make them design materials better so they don't become trash or litter.

I am interested in knowing whether we can achieve source reduction with EPR. Definition of source reduction- preventing waste before it is created- not having any waste to manage, control, or clean up.

I look to Europe for several reasons:

- Longest running EPR packaging program
- Most robust data sets

Goals of EPR

» Original German Packaging Ordinance 1991: “Directive on the Prevention of Packaging Waste”

- Incentivize producers to reduce waste by making them responsible for End of Life (EOL)

» EPR packaging laws- varied goals:

- Environmental design
- Promote recycling
- Prevent packaging generation



A significant rationale for implementing the very first EPR law in 1991, the German packaging ordinance, was to reduce the consumption of resources by creating a policy that would decrease the consumption of packaging.

The statute, titled the the “Directive on the Prevention of Packaging Waste” - basic requirement of the law was that those who introduced sales packaging (which excludes transport packaging) into the marketplace would have to take it back after the product is sold and pay the costs of recycling or disposal.

The rationale was that if producers bear the financial and/or physical responsibility for EOL management of products, there is a built in financial incentive to reduce the overall quantities of waste requiring disposal.

Some EPR packaging policies include a wide range of goals, including (1) encouraging companies to design products for reuse, recyclability, and materials reduction; (2) motivating consumers to purchase less wasteful products based on new price signals; and (3) promoting innovative recycling technology.

EU Packaging Laws

- » EOL hierarchy with prevention highest goal
- » Performance measures ONLY addressed diversion:
 - By 2008 at least 55-80% recycled
 - 60% glass, paper, and board
 - 50% metals
 - 22.5% plastics
 - 15% wood
- » Essential requirements – not targets
 - Weight, volume, toxicity minimized and design for recycling, compost, or incineration



In place since 1995, EU Packaging Directive (which adopted the German model) specified a “hierarchy” of EOL waste management options making waste prevention the highest goal, followed by reuse, recycling, other forms of recovery (including incineration with energy recovery), and finally disposal via landfill or incineration without energy recovery.

The Directive originally set recovery targets of 50 percent to 65 percent for packaging waste, stipulating a recycling rate of 25 percent to 45 percent, to be achieved by June 2001. This original goal has since been revised twice.

The current Directive established that by December 21, 2008, at least 60% of packaging waste would be recovered and between 55% and 80% by weight of packaging waste would be recycled.

Materials target recycling rates were:

60% by weight for glass, paper and board;
50% by weight for metals;
22.5% by weight for plastics; and
15% by weight for wood.

The Directive also includes some Essential Requirements for all packaging placed on the market within the EU. These Essential Requirements can be summarized as follows:

Packaging weight and volume should be minimized to the amount needed for safety and acceptance of the packed product;

hazardous constituents of packaging should have minimum impact on the environment at end of life; and

Packaging should be suitable for material recycling, energy recovery or composting, or for reuse.

These standards have been adopted by the 27 EU member states and Iceland, Norway and Switzerland.
recovery- they are forms of recovery, as is incineration with energy recovery.

Each country has different levels of producer responsibility r- some involve shared responsibility by municipal government. Generally, the more fully the producers bear the burden, the more likely the program is to achieve significant results.

Recycling Goals Met

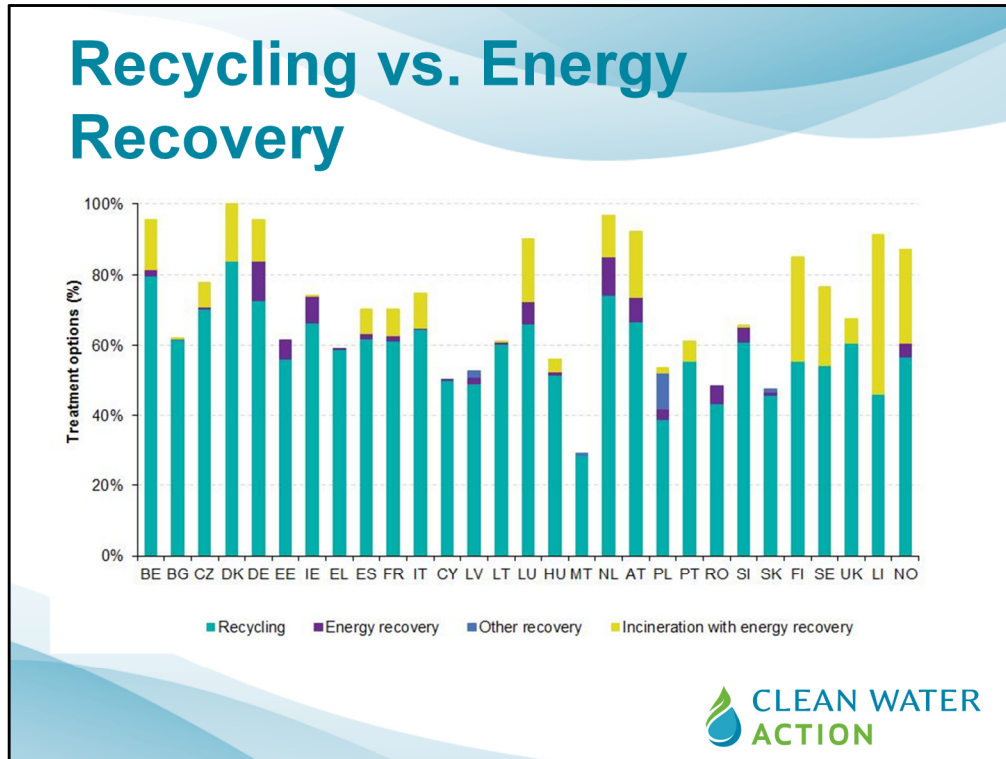


Source: Eurostat - Data centre on waste

Recycling rate for all packaging in 2010



The 2008-target is 55 %. All countries subject to meeting the 2008-target of 55 % recycling rate by the end of 2008 have achieved the target except Sweden (54.3 %).

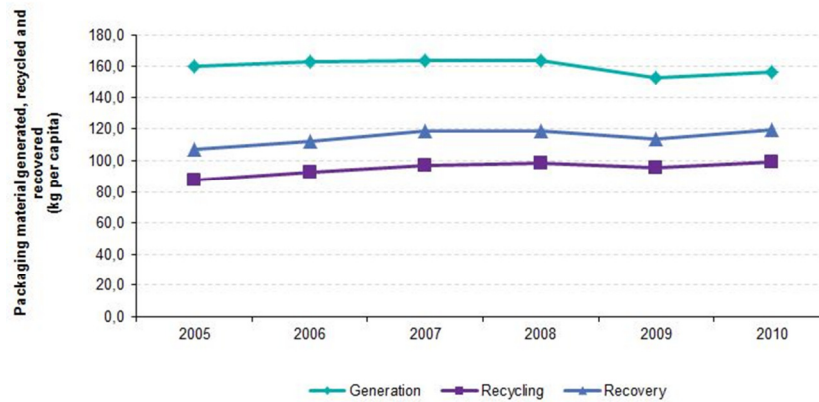


shows the share of treatment options for the overall packaging waste.

The major form of recovery in all countries is recycling.

In some countries 'Energy recovery' and 'Incineration with energy recovery' contribute significantly to the overall recovery rate. Especially countries which utilize 'Incineration with energy recovery' as a standard method of waste disposal achieve a significant higher recovery rate. Typically are the Nordic countries but also Belgium, Germany, the Netherlands and Austria.

Recycling and Recovery Increased and Generation Decreased Slightly



Source: Eurostat

Development of packaging waste generated, recovered and recycled, EU-27, 2005-2010 (tons per capita)

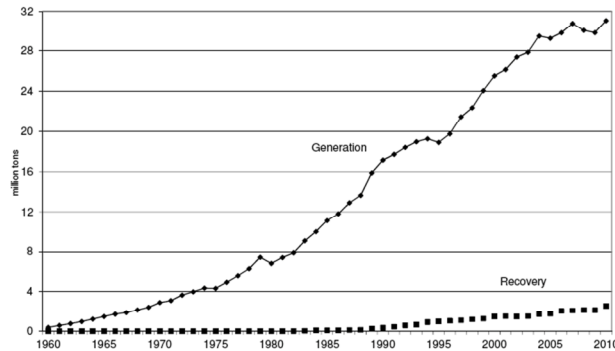


This graph highlights that the amount of packaging waste recycled and recovered rose more than the amount of packaging waste generated.

While for the 2005-2010 period the packaging waste generated shows a slow decline, the recycling and recovery volume in 2010 is higher than in 2005.

Even during the 2009 slump, the recycling and recovery volume only experienced a short reduction and in 2010 gained the highest volume since reporting started.

California Plastics Recycling 1960-2010



- The U.S. per capita solid waste generation increased from 2.68 lbs/day in 1960 to 4.34 lbs./day in 2009.

- EU per capita solid waste generation is approx. 1 lb/day



I don[t have a good comparison of generation to recycling for the U.S. but let's just consider the rate of generation of plastics versus the recycling rate in California over the last 50 years. Generation far far outpaces recycling- and we're probably the best state in terms of recycling of plastic.

In terms of solid waste, the Average European generates approx. 1 lb. of waste per day, while the average American generates 4.34 pounds per day.

We generate way more trash in the U.S.

U.S. compared to EU – Recycling and Generation

Containers and packaging	U.S. Weight generated	U.S. Weight recovered	EU generation and recovery in 2010
Steel	2.74	1.89	Met requirements
Aluminum	1.90	0.68	Metal 50%
Glass	9.36	3.13	Glass 60%
Paper and paperboard	37.68	26.85	Paper and Board 60%
Plastics	13.68	1.85	Plastics 22.5%
Wood	9.94	2.30	Wood 15%
Other materials	0.34	Negligible	
Total containers and packaging	75.64	36.70	Overall 55%

Generation and Recovery of Products in MSW, 2010* (in millions of tons percent of generation of each product) - US EPA



We recycle a lot less of it. Here's a comparison specifically of packaging recycling by material type.

Overall, the U.S. (with very specious and industry-friendly reporting to EPA) recycles about 37% of packaging overall- kind of hard to believe but that 's what EPA reported in 2010.

Meanwhile, the EU, across the board, meets the 55% overall recycling of packaging goal.

Improving on EU EPR

- » EU way better than U.S. in limiting increases in generation and boosting recycling
- » Need waste prevention performance measures and other requirements focused on source reduction
 - Reduce quantity of packaging that is generated by material type
 - Deposits
 - Limit Product/Packaging Ratio
 - Mandatory Reusable/Refillables Policy
 - Bans on Problem Packaging



The Answer to the question of whether EPR can reduce trash at the source:

I believe it can slow the rate of increase in generation and stabilize it if we follow the European model and achieve higher recycling rates, which is a great outcome. But for reducing trash at the source, and thereby having less trash to pull out of the environment, we are going to need greater focus on policy measures that drive prevention of waste.

That means some built in performance measures for waste prevention-

Like requiring that the overall quantity of packaging put into the marketplace be reduced.

Deposits- clearly work to increase recycling and prevent litter

Product Packaging Ratio= limit on the amount of packaging that can be used per product to only that needed to contain the product

Mandatory refillables- require a % of containers on market – esp beverage containers- are refillable